

practice. A societal perspective incorporated the following indirect costs: formal and informal long term care costs for stroke, productivity losses associated with stroke and carers, and productivity, out of pocket and travel costs associated with INR testing in both metropolitan and rural settings. The opportunity cost of a delayed dabigatran PBS listing was estimated over a 2 year period. Estimates were derived using the economic model presented to the PBAC. **RESULTS:** When incorporating a societal perspective, dabigatran was cost saving versus both warfarin and the mixed comparator. Dabigatran is estimated to save an average of \$2,011 and \$3,994 per patient per year for patients in metropolitan and rural settings respectively compared with current practice. In the more than two years since the initial PBAC recommendation of dabigatran it is estimated over 150,000 patients have been denied affordable access to treatment, resulting in \$47.9 million in costs to Medicare, \$5.2 million in patient out of pocket costs and 470,000 hours of lost productivity due to avoidable INR testing. Importantly, 4,059 strokes and 902 resultant deaths could have been avoided in this time compared to current practice. **CONCLUSIONS:** Dabigatran is a cost-effective treatment for stroke prevention in patients with NVAF in Australia and is cost saving compared to current therapy (warfarin, aspirin and no treatment) when a societal perspective is taken.

#### PCV87 COMPREHENSIVE OVERVIEW: EFFICACY, TOLERABILITY AND COST-EFFECTIVENESS OF IRBESARTAN

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**OBJECTIVES:** Hypertension represents a major health problem, affecting more than 1 billion adults worldwide. Irbesartan, an angiotensin II receptor blocker, is considered to be a highly effective treatment in the management of hypertension. Therefore this study aims to evaluate the efficacy, safety and tolerability profile, as well as the cost-effectiveness of irbesartan in the treatment of hypertension. **METHODS:** A review of the literature was conducted using the electronic databases Medline, Cochrane and HEED of search terms relating to irbesartan efficacy, tolerability and cost-effectiveness and the results were synthesized. **RESULTS:** Findings from the present analysis show that irbesartan either as monotherapy or in combination with other agents can have significant reductions in Blood Pressure, both systolic and diastolic, when compared to other alternative treatment options. Irbesartan was also found to have a renoprotective effect, independent of its blood pressure lowering effect in patients with type 2 diabetes and nephropathy. Irbesartan also delayed onset of end-stage renal disease (ESRD) and reduced the cumulative incidence of ESRD. Furthermore, Irbesartan demonstrated an excellent safety and tolerability profile. Overall adverse event incidence with irbesartan was comparable with other antihypertensive drugs. Most common adverse events were headache, fatigue and dizziness. In terms of economic analyses, compared to other antihypertensive therapy alternatives, irbesartan increased life expectancy and lead to substantial cost savings. **CONCLUSIONS:** Evidence indicates that treating patients with hypertension alone or with type II diabetes and nephropathy, can control hypertension, prolong life and reduce costs, in relation to other existing alternatives.

#### PCV88 INDIVIDUALLY TAILORED ELASTIC COMPRESSION THERAPY FOR THE PREVENTION OF POST THROMBOTIC SYNDROME

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Post thrombotic syndrome (PTS) is a chronic condition that develops in up to 50% of patients after deep vein thrombosis and is characterized by debilitating complaints of the leg. Two randomized controlled trials (RCT) showed that elastic compression stocking (ECS) therapy for 2 years after DVT reduces the PTS incidence by approximately 50%. A recent management study showed that tailored duration of ECS therapy on individual patient characteristics may result in a reduction of ECS therapy of 18 months for 50% of patients with an even lower incidence of PTS. However, these results may be biased. **OBJECTIVES:** To explore the cost-effectiveness of individually tailored ECS therapy (IND) compared with a standard duration of 2 years ECS therapy (STANDARD), from a health care perspective in order to inform the design of an RCT comparing the two treatment options. **METHODS:** A decision-analytic probabilistic Markov model with lifelong time horizon was used. Health states in the model are: No PTS with stocking, No PTS without stocking, Mild to moderate PTS, Severe PTS, and Death. Transition probabilities, costs, and utilities were obtained from literature. The incidence of PTS was taken from the trials (STANDARD: 2-year incidence 24.5%) and the management study (IND: 2-year incidence 21.1%). The delta for non-inferiority of a future RCT was determined, and uncertainty was assessed in value of information analyses. **RESULTS:** Based on current evidence IND saves €2,292 and gains 0.14 quality adjusted life years (QALY) per patient compared to STANDARD. This result is however highly uncertain, and future research is valuable. The savings of IND amount to €306 when assuming equal incidence of PTS. If PTS incidence is 7% higher in IND, the treatment seems to be cost-effective. **CONCLUSIONS:** Based on current limited evidence, IND may dominate STANDARD. Future research is worthwhile, and may be informed by this modeling study.

#### PCV89 THE COST-EFFECTIVENESS OF SCREENING FOR SILENT ATRIAL FIBRILLATION AFTER ISCHAEMIC STROKE

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**OBJECTIVES:** Prolonged brief intermittent arrhythmia screening has been suggested to substantially improve detection of silent paroxysmal atrial fibrillation (AF) in

patients with a recent ischemic stroke/TIA. The purpose of this study was to estimate the cost-effectiveness of two screening methods for detection of silent AF, brief intermittent long-term ECG recordings at regular time intervals and short-term 24-hours continuous ECG (Holter-ECG) and to compare them to a no screening alternative in patients with a recent ischemic stroke. **METHODS:** The long-term (20 year) costs and effects of brief intermittent long-term ECG recordings at regular time intervals and short term continuous ECG are estimated with a decision analytic model combining the result of a clinical study and epidemiological data. The structure of a cost-effectiveness analysis was used in this study. The short term decision tree model analyzed the screening procedure until the onset of anticoagulant treatment. The second part of the decision model follows a Markov design simulating the patients for 20 years. **RESULTS:** Continuous 24 h ECG recording was dominated by intermittent ECG due to lower sensitivity and higher costs. The base case analysis compared intermittent-ECG screening with no screening of patients with recent stroke. The implementation of the screening program on 1000 patients resulted in 10.9 avoided strokes and the gain of 29.2 life years or 22.7 QALYs and cost savings of €55 000. **CONCLUSIONS:** Screening of silent AF by intermittent ECG recordings in patients with a recent ischaemic stroke is cost-effective use of health care resources saving costs, lives and quality of life.

#### PCV90 ISSUES WITH COST-EFFECTIVENESS MODELLING OF DIAGNOSTIC TESTS – CASE STUDY OF ISCHAEMIC CARDIOMYOPATHY

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**OBJECTIVES:** To estimate the cost-effectiveness of diagnostic pathways for assessing patients with ischaemic cardiomyopathy to identify patients with viable myocardium with a view to revascularisation. **METHODS:** A decision analytic model was developed to estimate the cost-effectiveness of diagnostic strategies for assessing patients with ischaemic cardiomyopathy. The different diagnostic pathways were applied to a hypothetical cohort of patients with ischaemic cardiomyopathy and the probability of successful identification of viable myocardium and non-viable myocardium was determined by the accuracy of the diagnostic pathway. It was assumed that patients diagnosed with viable myocardium would be managed promptly by revascularisation and that the patients diagnosed with non-viable myocardium would be on medical therapy. The model assigned each patient a risk of death and rehospitalisation depending upon whether they are truly viable and whether they had revascularisation or not. Each patient then accrued lifetime QALYs. Health care costs were also accrued through measuring diagnostic costs and treatment costs, depending on the pathway and their treatment status. **RESULTS:** All the diagnostic pathways are cost-effective when compared with no testing at current NICE threshold, this suggests that all the current services for diagnosing viable myocardium are a cost effective use of NHS resources irrespective of the diagnostic pathway used. For services that need to decide the most cost-effective strategy starting from scratch, then Stress CMR is the most cost-effective strategy. **CONCLUSIONS:** There are a number of issues with abstracting the data for cost-effectiveness modelling of diagnostic tests. For example, the diagnostic accuracy depends upon the type of index test, gold standard test and threshold used. Furthermore, the benefits of treatments after diagnosis are not always clear and might be linked to the type of diagnostic test. Appropriate caution needs to be taken when evaluating diagnostic tests.

#### PCV91 ECONOMIC EVALUATION OF IVABRADINE FOR CHRONIC HEART FAILURE NYHA II TO IV CLASS WITH SYSTOLIC DYSFUNCTION IN IRELAND

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**OBJECTIVES:** Ivabradine is approved by the European Medicine Agency for the treatment of Chronic Heart Failure (CHF) NYHA II to IV class with systolic dysfunction in patients in sinus rhythm and whose heart rate is  $\geq 75$  bpm, in combination with standard therapy including beta-blocker therapy or when beta-blocker therapy is contraindicated or not tolerated. The study objective was to perform a cost-effectiveness analysis of ivabradine based on the outcomes of the SHIFT clinical trial from the perspective of the Irish Health Service Executive (HSE). **METHODS:** A six health state Markov model with health states for CHF NYHA classes I to IV, alive, and dead was adapted to the Irish health care setting. The economic evaluation compared the cost-effectiveness of ivabradine in combination with standard therapy versus standard therapy alone. A lifetime horizon was chosen in the base case analysis. Costs and effects were discounted at 4% per year. Deterministic and probabilistic sensitivity analyses were performed. Health state utilities were estimated from EQ-5D index scores obtained from the SHIFT clinical trial. The base case analysis was based on heart failure outcomes and associated costs. **RESULTS:** When used in addition to standard therapy, ivabradine increased discounted health care costs by €2169 for a 0.23 QALY gain, resulting in an incremental cost per QALY gained of €9,426. In no case of the deterministic sensitivity analysis did the cost per QALY gained increase above €20,000. The probability of the cost-effectiveness of ivabradine at a willingness to pay threshold of €45,000 per QALY gained was estimated to be approx. 100%. **CONCLUSIONS:** When used in addition to standard therapy, based on heart failure outcomes and associated costs, ivabradine had an incremental cost per QALY gained of €9,426 with an approximately 100% probability of being cost-effective at a willingness to pay threshold of €45,000 per QALY gained.

#### PCV92 THE COST-UTILITY OF CATHETER-BASED RENAL DENERVATION AS COMPARED TO CURRENT STANDARD OF CARE FOR RESISTANT HYPERTENSION IN BELGIUM

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**OBJECTIVES:** Hypertension affects 41% of male and 31% of female adults in Belgium; 13% of these are believed to be refractory to standard hypertension treatment (uncon-